

TNRCC

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Electronic

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Reporting

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Requirements

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TEXAS NATURAL RESOURCE  
CONSERVATION COMMISSION

# Contents

## EXECUTIVE SUMMARY

Introduction	1
Document Objectives	1
Document Findings	1

## SYSTEM DESCRIPTION

Introduction	2
Brief History Of Electronic Reporting at TNRCC	2
Brief Description of TRACS	3
Report Data Specifications	3
Solid Waste	3
Flow of Data	3
Input Requirement Definition	4
Monthly Waste Receipt Summary	5
Input File Definition	5
Minimum Validation Standards	5
Monthly Waste Shipment Summary	6
Input File Definition	6
Minimum Validation Standards	7
Wastewater	8
Flow of Data	8
Input Requirement Definition	9
Input File Definition	9
Minimum Validation Standards	9
Ground Water*	
Underground Injection Wells*	
Air*	
Toxic Release Inventory (TRI)*	

## APPENDIX

TRACS Overview Document	A1
Information Flow Between TNRCC and Report Originators	B1

(\* to be provided at a later date)

# Executive Summary

## Introduction

The Advisory Committee for Environmental Electronic Reporting in Texas (ACEERT) has been steadfast in support of the Texas Natural Resource Conservation Commission's (TNRCC) involvement in electronic reporting. The committee has written TNRCC encouraging them to expand their efforts in this area. They produced this document to facilitate the accumulation of quality assurance/quality control (QA/QC) requirements for electronic reporting development projects.

Current efforts of TNRCC are focused on automating existing paper distribution and adding functionalities of editing and quality assurance. There is no attempt at this time, to reduce duplicity in the submission of information across program areas and/or types of media.

This document provides historical information on electronic reporting, TNRCC Regulatory Activities Compliance System (TRACS) information and file requirement information that can be used for electronic reporting planning. Additional file requirements will be added to this document when they are completed.

## Document Objective

The objective of this document is to provide file requirement information to the regulated community that can support the electronic reporting development efforts of TNRCC.

## Document Findings

The need for an electronic reporting process of solid waste has been satisfied by the State of Texas Environmental Electronic Reporting System (STEERS) software. Therefore, file

requirements stated in this document for solid waste are for informational purposes only. Regulated community members can use the requirements to automate input to STEERS instead of providing manual input.

Plans for the development of an electronic reporting module for wastewater by TNRCC using standards in this document are in progress. Plans for development in other program areas are proceeding as they are identified and prioritized by a team of TNRCC staff.

Solid waste and wastewater application areas feed information to TRACS. Application areas identified for future electronic reporting development will not be restricted to those feeding TRACS.

## System Description

### Introduction

This section provides a background on our electronic reporting efforts, describes the role of TRACS and defines a base of requirements from which future efforts can progress. It is hoped that members of the regulated community can continue participation in our efforts to increase TNRCC's ability to receive electronic reporting data.

## Brief History of Electronic Reporting at TNRCC

In January 1991, the Texas Chemical Council (TCC) and the Texas Water Commission (TWC), produced a memorandum of understanding to aid the development of electronic reporting. The result of TCC's effort was a program called the Environmental Quality Information System (EQIS). EQIS is now a licensed product of the Process Data Control (PDC) Company. It is designed to provide reports and process solid waste, ground water and wastewater manifest input data for customer transmission to TNRCC.

The Waste Evaluation Section of the TWC began work on its own electronic reporting system in 1991. In February 1992, a Total Quality Management (TQM) Quality Action Team (QAT) was assembled to provide recommendations for the improvement of the industrial and hazardous waste self-reporting process. Its recommendations were completed in November of 1992. Recommendation for the development of the State of Texas Environmental Electronic Reporting System (STEERS) was a product of the QAT. The Waste Evaluation Section, with support from Information Resources, completed STEERS in January

1994. Its design has expanded to process solid waste data for the monthly waste receipt summary, waste shipment summary, annual waste summary and amendments to the notice of registration (NOR).

In December 1992, the Advisory Committee for Environmental Electronic Reporting in Texas (ACEERT) was formed to facilitate the development and implementation of regulatory reporting in Texas. It is composed of members of the Texas Chemical Council (TCC), Process Data Control (PDC) and staff from the TNRCC. Current TCC representatives are from Monsanto, Rohm and Haas, Hoechst Celanese, DuPont and Alcoa. TNRCC staff are from Information Resources, the Office of Water, and the Office of Waste. A letter was written in May 1994 by TCC on behalf of ACEERT, supporting the growth and dedication of resources to electronic reporting within TNRCC.

This document is written by ACEERT to facilitate the electronic reporting efforts of TNRCC. The committee continues to support TNRCC's effort to expand development in other program areas of the agency, beginning with wastewater and ground water.

Electronic reporting efforts in the Office of Air have progressed separately. They have been using a Computer

Emissions Inventory System (CEIS) for over five years. This PDC-owned product edits and reports on manifest data that is written to a diskette and mailed to the Air Emissions Inventory area of TNRCC. A major development effort, the Federal Clean Air Act (FCAA) system, containing electronic reporting capability is in progress. Definitive information on Office of Air applications is not included in this document, since the effort is in progress. FCAA file requirement information will be added to this document when it becomes available.

## Brief Description of TRACS

The TNRCC Regulatory Activities and Compliance System (TRACS) was designed to provide a common method of storing and accessing information about agency clients and their facilities, with similar methods of processing permits and registrations, recording potential and actual pollutants, handling queries and generating reports.

Functional areas that have been addressed include:

- ◆ Foundation Architecture
- ◆ Foundation Data
- ◆ Billing
- ◆ Watershed Management Permits
- ◆ Surface Water Quality Monitoring

- ◆ Standards and Segments
- ◆ Water Rights and Uses
- ◆ Industrial and Hazardous Waste
- ◆ Storage Tanks
- ◆ Federal Clean Air Act Amendments

Electronically reported solid waste (industrial and hazardous waste) and wastewater (watershed management permits) file data will be processed by TRACS. Their file requirements are described in this document. When QA/QC validated data is received by TNRCC, it is read by an application specific loader module before being processed by TRACS. The loaders for solid waste and wastewater have been written. Loaders for other areas will be written as needed, by TNRCC staff.

See Appendix A for additional information on TRACS.

## Report Data Specifications for Solid Waste Flow of Data

Each generator of solid waste must account for shipment of material which leaves the generator's site. The hazardous waste manifest is the fundamental tool used for tracking solid waste shipments. In Texas, hazardous waste and Class 1 waste shipments are required to be documented on a hazardous

waste manifest. The manifest was developed in a manner which allows a copy of the paperwork to remain with the waste during its entire life as well as each entity which comes in contact with the waste. The manifest provides all of the off-site shipment information which must be submitted to the TNRCC under the reporting requirements set forth in (but not limited to) 30 Texas Administrative Code (TAC) §335.9(a)(2), §335.13(b), §335.15(2), §335.71(a). These reporting requirements are specifically for hazardous and Class 1 wastes.

Before implementation of the State of Texas Environmental Electronic Reporting System (STEERS), some reporting requirements were fulfilled by submission of paper reports prepared by the generators. These reports were received by the TNRCC, outsourced to create formatted tape files, then loaded into TRACS. Other generators satisfied reporting requirements by submitting a tape file or diskette containing reporting information. This data was loaded into TRACS also. Any errors in the data which TRACS encountered, triggered an error report. Sometimes errors were identified before the data was loaded into TRACS. The generator was then contacted to submit a corrected report. This process was time consuming for both the reporter and the

TNRCC. Additionally, large quantities of paper were generated and stored. The "flow of data" could be described by diagram #1.

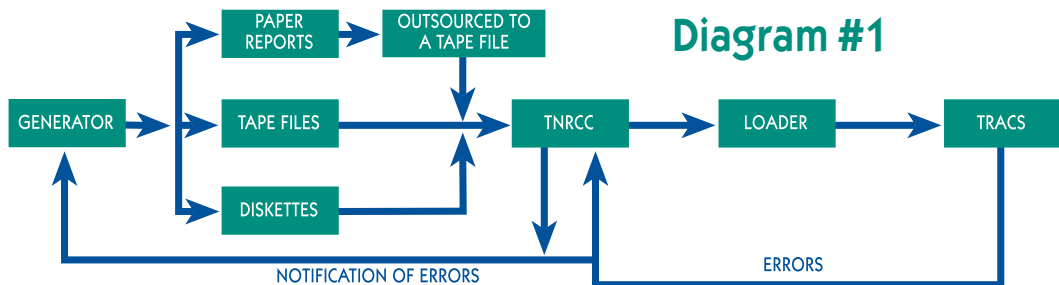
Since the implementation of STEERS, data can now be submitted electronically. The reporter uses a modem to send the data to a bulletin board designed to transfer data to TRACS. The TNRCC will not call up other user's bulletin boards to retrieve reporting data. This process reduces the use of paper and reduces the staff level needed to correct errors.

The TNRCC has adopted rules which promote the reporting of waste activity data electronically. These rules were

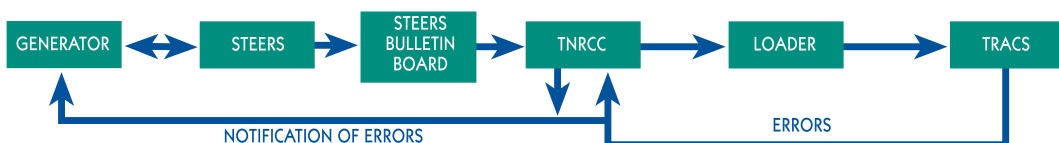
proposed on November 26, 1993, adopted on January 25, 1994, and became effective on February 4, 1994. The sections of the Texas rules which were affected are: 30 TAC §§335.9, 335.13, 335.15, and 335.71. Essentially, these rules require generators of industrial and hazardous waste to submit complete and accurate reports each month. If a reporter continues to submit incomplete reports or reports with errors, the TNRCC now has the authority to levy fines. Reporters who submit reports electronically via approved software will be exempt from some of these fines. The flow of data could be described by diagram #2.

## Input Requirement Definitions

The following information is the input requirement definitions to submit solid waste reports electronically. These reports must be in ASCII format. All fields should be double quote (") delimited and separated by commas (,), e.g., "field1", "field2", ... . Fields represented by 'A#' are alphanumeric with the length specified by the number following the 'N.' Fields represented by characters in bold should appear exactly as indicated.



## Diagram #2



## Monthly Waste Receipt Summary - Input File Definition

Field Name	Format/Size
Receiver SWR Number	A5
Type of Report	A2, "R1"
Internal Use	A1, blank (" ")
Report Period(MMY)	N4
No Shipments Received	A1, "X" or blank (" ")
St. Manifest Document No.	A8
Generator's Texas ID	A5
Generator's EPA ID	A12
Texas Waste Code	A8
EPA Hazardous Waste No. (1)	A4
EPA Hazardous Waste No. (2)	A4
EPA Hazardous Waste No. (3)	A4
EPA Hazardous Waste No. (4)	A4
Quantity	N9
Unit	A1, "T", "P", or "K"
System Type Code	A3
Date Received	(MMDDYY)
Transporter	A5
Method of Reporting	A1, B
Action Code	A1, "A"

## Monthly Waste Receipt Summary - Minimum Validation Standards (QA/QC)

### Receiver's SWR Number

Required field, cannot be left blank.

Must be in a TNRCC ID table.

### Type of Report

Required field, cannot be left blank.

Must be "R1".

### Report Period

Required only if "no shipments received" is flagged.

Must be in the form of MMY.

### No Shipments Received

Required only if no hazardous or Class 1 waste shipments were received during the reporting period.

If flagged, flag with an "X".

Leave blank if any shipments were received during the reporting period.

### State Manifest Document Number

Required field, cannot be left blank.

This is an eight character field which may have both letters and numbers. It

should contain the number in box A of the Uniform Hazardous Waste Manifest. It may also begin with letters that are an abbreviation for the state or letters that are also present in box A of the manifest. This field may not exceed eight (8) characters. If reporting an unmanifested waste, you must supply a reference number which you assign (invoice, bill of lading, or some other number).

### Generator's Texas ID

Required field, cannot be left blank.

If the generator is in Texas, then this should be a TNRCC solid waste registration (SWR) number, an XXX number or conditionally exempt small quantity generator (CESQG) number.

Must be a value in the TNRCC ID table and not a "Z00" code.

### Generator's EPA ID

Required field, cannot be left blank.

If the waste is hazardous, the generator's EPA ID must be provided and the codes must correspond to the same state unless the generator is CESQG. If the waste is nonhazardous or the generator is CESQG, enter the generators EPA ID or company name (abbreviate as necessary).

If the waste came from a foreign generator, enter the import of record's EPA ID (or name if nonhazardous).

**Texas Waste Code**  
 Required field, cannot be left blank.  
 The code must be six or eight digits, any other lengths are invalid.  
 six-character waste code standards: the first character must be a one or nine. If it is a Class 2 or 3, the waste code may be valid, but Class 2 and 3 wastes are not to be reported. If it is anything else, the code is invalid.  
 The remaining five characters (base code) must be in the base code table.  
 eight-character waste code standards: the first four characters must be a valid sequence number (numbers only for registered generators, alphanumerics for one-timers, out-of-state and CESQGs). The next three characters must be a valid form code in the table. The last character must be a one or an "H". If it is a Class 2 or 3, the waste code may be valid, but Class 2 and 3 wastes are not to be reported.  
 Any other hazardous waste classification codes are invalid.

**EPA Hazardous Waste Numbers (1), (2), (3), & (4)**  
 If the waste is hazardous, there must be at least one

EPA hazardous waste number provided. These can be found in 40 CFR 261. There are fields for up to four EPA hazardous waste numbers. If the waste has more than four applicable numbers, use the four that best describe the waste or the first four on the manifest. If there are less than four applicable numbers, leave the unneeded fields blank. If the waste is not hazardous, then all 4 fields should be blank. See Box I, J, or 11 on the manifest.

**Quantity**  
 Required field, cannot be left blank.  
 Must be numeric.  
 There are only nine digits allowed for this field. If a decimal is used, it counts as one of the nine digits.  
 Do not use commas.

**Unit**  
 Required field, cannot be left blank.  
 The only allowed units are pounds (P), kilograms (K) or tons (T).

**System Type Code**  
 Required field, cannot be left blank.

Monthly Waste Shipment Summary - Input File Definition	
Field Name	Format/Size
Generator TNRCC ID Number	A5
Type of Report	A1, S1
Internal Use	A1, blank ( " )
Company Name	A25
St. Manifest Document No.	A8
Receiver's Texas ID	A5
Receiver's EPA ID	A12
Texas Waste Code	A8
EPA Hazardous Waste No. (1)	A4
EPA Hazardous Waste No. (2)	A4
EPA Hazardous Waste No. (3)	A4
EPA Hazardous Waste No. (4)	A4
Quantity	A9
Unit	A1, "T", "P", or "K"
System Type Code	A3
Date Received	N4, (MMDDYY)
Transporter	A5
Method of Reporting	A1, "B"
Action Code	A1, "A"

Must be in the system type code table.	ments received” is flagged.	must correspond to the same state.
Box K on the manifest.	There are 25 spaces available for this field. Leave unneeded spaces blank and do not exceed the allotted space.	If the waste is nonhazardous, enter the receiver's EPA ID or company name (abbreviate as necessary).
<b>Date Received</b>	Name should be consistent on all reports.	<b>Texas Waste Code</b>
Required field, cannot be left blank.	<b>State Manifest</b>	Required field, cannot be left blank.
Must be in MMDDYY format.	<b>Document Number</b>	The code must be six or eight digits, any other lengths are invalid.
Cannot be a future date or prior to 1986.	Required field, cannot be left blank.	six-character waste code standards: the first character must be a one or nine. If it is a Class 2 or 3, the waste code may be valid, but Class 2 and 3 wastes are not to be reported. If it is anything else, the code is invalid.
<b>Transporter</b>	This is an eight character field which may have both letters and numbers. It should contain the number in box A of the Uniform Hazardous Waste Manifest. It may also begin with letters that are an abbreviation for the state or letters that are also present in box A of the manifest. This field may not exceed eight characters.	The remaining five characters (base code) must be in the base code table.
Required field, cannot be left blank.	<b>Receiver's Texas ID</b>	eight-character waste code standards: the first four characters must be a valid sequence number (numbers only for registered generators, alphanumerics for one-timers, out-of-state and CESQGs). The next three characters must be a valid form code in the table. The last character must be a one or an “H”. If it is a Class 2 or 3, the waste code may be valid, but Class 2 and 3 wastes are not to be reported.
Must be in the TNRCC ID table and cannot be an XXX, 999 or Z00 code.	Required field, cannot be left blank.	Any other hazardous waste classification codes are invalid.
<b>Method of Reporting</b>	If the receiver is in Texas, then this should be a TNRCC SWR.	
Required field, cannot be left blank.	If the receiver is out-of-state, use the appropriate code from Appendix A.	
Electronic reports must have a “B” here.	Must be a value in the TNRCC ID table and not a “999” code.	
<b>Action Code</b>	<b>Receiver's EPA ID</b>	
Required field, cannot be left blank.	Required field, cannot be left blank.	
“A” for adding a record and “D” for deleting a record.	If the waste is hazardous, the receiver's EPA ID must be provided and the codes	
<b>Monthly Waste Shipment Summary - Minimum Validation Standards (QA/QC)</b>		
<b>Generator's Solid Waste Registration (SWR) Number</b>		
Required field, cannot be left blank.		
Must be a value in the TNRCC ID table.		
<b>Type of Report</b>		
Required field, cannot be left blank.		
Must be “S1”.		
<b>Generator's Name</b>		
Required only if “no ship-		

## EPA Hazardous Waste

### Numbers (1), (2), (3), & (4)

If the waste is hazardous, there must be at least one EPA Hazardous Waste number provided. These can be found in 40 CFR 261. There are fields for up to four EPA Hazardous Waste Numbers. If the waste has more than four applicable numbers, use the four that best describe the waste or the first four on the manifest. If there are less than four applicable numbers, leave the unneeded fields blank. If the waste is not hazardous, then all four fields should be blank. See Box I, J, or 11 on the manifest.

### Quantity

Required field, cannot be left blank.  
Must be numeric.  
There are only nine digits allowed for this field. If a decimal is used, it counts as one of the nine digits.  
Do not use commas.

### Unit

Required field, cannot be left blank.

The only allowed units are pounds "P", kilograms "K" or tons "T".

### System Type Code

Required field, cannot be left blank.  
Must be in the system type code table.  
Box K on the manifest.

### Date Received

Required field, cannot be left blank.  
Must be in MMDDYY format.  
Cannot be a future date or prior to 1986.

### Transporter

Required field, cannot be left blank.  
Must be in the TNRCC ID table and cannot be an XXX, 999 or Z00 code.

### Method of Reporting

Required field, cannot be left blank.  
Electronic reports must have a "B" here.

### Action Code

Required field, cannot be left blank.  
"A" for adding a record and  
"D" for deleting a record.

## Report Data Specifications for Wastewater

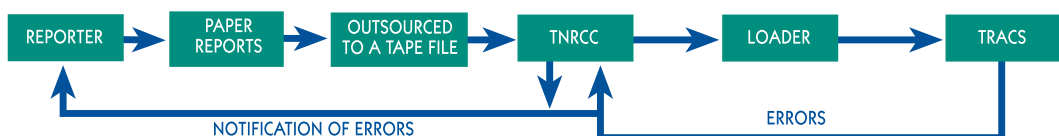
### Flow of Data

Each holder of an active waste discharge permit is required to submit periodic reports summarizing the analyses of all the parameters required to be monitored by TNRCC regulations and the permit.

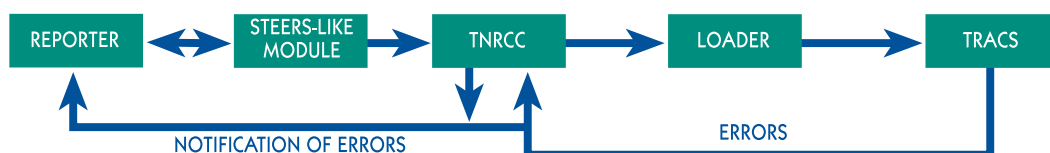
Reporting requirements are currently fulfilled by submission of paper reports prepared by the reporters. These reports are received by the TNRCC, out-sourced to create formatted tape files, then loaded into TRACS. Any errors in the data trigger an error report. Sometimes errors are identified before the data is loaded into TRACS. The reporter must then be contacted to submit a corrected report. This process is time consuming for both the reporter and the TNRCC. Additionally, large quantities of paper are generated and stored. The flow of data could be described by diagram #3.

In order to simplify the submittal of the required reports

## Diagram #3



## Diagram #4



and minimize errors in report data, electronic reporting is being promoted. TNRCC has defined QA/QC input file requirements for wastewater. The reporter will be able to create a data file via a company QA/QC module and transmit it to the TNRCC On-Line bulletin board. A reporter could also enter data into a QA/QC

module developed by TNRCC to create a data file. Accumulated data files will be loaded into TRACS. An error report will be generated. TNRCC will review the report and inform the reporter of any errors which must be corrected. The reporter then resubmits data correctly. The flow of data could be described by diagram #4.

## Input Requirement Definition

The following information is the input requirement definitions to submit wastewater reports electronically. These reports must be in ASCII format. All fields should be double quote (") delimited and separated by commas (.). Fields represented by characters in bold should appear exactly as indicated.

## Minimum Validation Standards (QA/QC)

### System and Action Code

Required field, cannot be left blank.

Value must be "40C" for electronically transmitted data.

### Extension ID

Required field, cannot be left blank.

Integer value, right justified padded with zeros.

This field uniquely identifies each outfall, inplant monitoring point, sampling point, etc.

Extension ID must be exactly as it appears on the self-reporting form sent by TNRCC.

## Input File Definition

Field Name	Format/Size
System and Action code	A3
Extension ID	N12
Requirement set number	N2
Report month and year	N4, (MMYYYY)
Reserved	A3
Parameter Code	N9
Report Value	N10
Number of exceptions	N2
Frequency of analysis	N2
Sample type	N2
Reserved	A1
Parameter Code	N9
Report Value	N10
Number of exceptions	N2
Frequency of analysis	N2
Sample type	N2
Reserved	A5

\* Reserved fields must be filled with blanks

**Requirement Set Number**  
 Required field, cannot be left blank.  
 Integer value, right justified padded with zeros.  
 This field identifies the requirement set that is being reported.  
 Requirement set number must be exactly as it appears on the self-reporting form sent by TNRCC.

**Report Year and Month**  
 Required field, cannot be left blank.  
 Must be in format of YYMM.  
 This field identifies the year and month for which data is being submitted.  
 Report year and month must be exactly as it appears on the self-reporting form sent by TNRCC.

**Reserved**  
 Must be blank.

**Parameter Code**  
 Required field, cannot be left blank.  
 Integer value, right justified padded with zeros.  
 Alpha value, left justified padded with spaces.  
 This field identifies the individual parameter that is being reported.  
 Parameter code must be exactly as it appears on the self-reporting form sent by TNRCC.  
 Parameter codes must be entered in ascending

numerical order. Data will not be accepted if an incorrect parameter code is entered or if a parameter code is entered out of numerical order.  
 If parameter code 000035342 (Days/Discharge) has a reported value of zero, the operator certificate information, which includes operator certificate number, operator certificate expiration date and operator certificate class, must also be entered if operator information is required.  
 The values for parameters 000045342 (UNAU/DIS Days) and 500497339 (UNAU/DIS Total) must also be reported if bypasses have occurred even if the value for parameter 000035342 (Days/Discharge) is zero.

**Report Value**  
 Required field, cannot be left blank.  
 Integer value, right justified padded with zeros.  
 Alpha value, left justified padded with spaces.  
 Either an integer value or alphabetic value depending on the parameter code.

**Number of Exceptions**  
 Required field, cannot be left blank.  
 Integer value, right justified padded with zeros.  
 This field should contain the number of times that

the parameter limit was violated within the reporting period. A daily maximum limitation may be exceeded any number of times throughout the reporting period, whereas, a daily average may only be exceeded one time for the reporting period.

**Frequency of Analysis**  
 Required field, cannot be left blank.  
 Integer value, right justified padded with zeros.  
 This field contains a value that denotes how often a sample should be taken.  
 Frequency of analysis should be exactly as it appears on the self-reporting form sent by TNRCC. If, however, a parameter is monitored more frequently than required by the permit, the increased frequency must be indicated with the proper code.

**Sample Type**  
 Required field, cannot be left blank.  
 Integer value, right justified padded with zeros.  
 This field contains a value that denotes the type of sample to be taken.  
 Sample type should be exactly as it appears on the self-reporting form sent by TNRCC.

**Reserved**  
 Must be blank.

# Appendix A

## TRACS Overview

The Texas Natural Resource Conservation Commission (TNRCC) has been in the process of converting its information system from a collection of disjointed databases and programs with no common technical base to a consolidated, agency-wide database and application. At the heart of the Integrated Information System (IIS) is a relational database called TNRCC Regulatory Activities and Compliance System (TRACS). This centralized database can benefit the agency in several ways by:

- ◆ Providing a common client base, thus reducing duplication by various divisions in entering client and facility information in the database
- ◆ Allowing customers access to information from other divisions (allowing more efficient regulation of facilities by sharing this information)
- ◆ Providing up-to-date information on the status of a particular activity (e.g. permit, remediation, request) as it moves toward completion.

The TNRCC information system strategy involves a back-end database for storing the agency's data that can be accessed

by users running graphical front-end applications. The front end "query" the back-end server and extract information that can then be inserted into the client application.

The main database is stored in the Ingres Relational Software package that resides on high speed multi-processor hardware from Pyramid Computer. The graphical front-end applications that allow TNRCC personnel to access this information are being developed with Ingres Windows 4GL and can run on either Unix/AIX/HPUX workstations, currently IBM RISC 6000 320 models and HP 9000 models, or PCs running MicroSoft Windows or DOS. The creation of these applications is a joint project between TNRCC Information Resources personnel and a team of consultants from Tracor Applied Sciences.

Benefits fall into six categories:

- ◆ Improved work practices/business operations efficiency,
- ◆ Data availability and accessibility,
- ◆ Added functionality,
- ◆ Fulfillment of mandated requirements,
- ◆ Increased revenue, and
- ◆ Technology advancement.

Benefits common to all functional areas in each of these categories are given below. Specific examples and benefits in each functional area are given in the detailed reports which follow.

## Improved Work Practices/Business Operations Efficiency

Because data has been integrated across organizational lines, there is a more timely response to public and agency staff requests for data. Questions which required coordination among program areas or sections are no longer necessary.

Backlogs have been eliminated as a direct result of TRACS applications.

Less data redundancy has resulted in reduced staff time to maintain data and increased accuracy of data. Less computer hardware resources are required to store the data. Service to the public is better since all functional areas are working off the same set of data.

Use of the foundation milestone template to track regulatory activities gives TNRCC management the capability to evaluate work efficiency, such as the average time from receipt of an application until issuance of a permit.

The response time in fulfilling requests for informa-

# Appendix A

tion from the public and agency staff is improved by having on-line/real-time access to data and adhoc query and reporting tools.

## Greater Data Availability and Accessibility

There is much more data available. In many cases, the volume of data could not be handled by the previous systems. Secondly, data is far more accurate, having gone through a clean-up process before it was migrated to TRACS. There is less redundant data because it is stored in a central repository and not duplicated in many independent databases.

With on-line data entry, data is immediately available to all customers of TRACS. Week-long delays from out-sourcing data entry have been eliminated.

Data is available to more people because it is not confined by organizational boundaries.

## Added Functionality

Enhanced capabilities were included with the release of each new application in each program area.

## Fulfillment of Mandated Requirements

The move to an open system architecture fulfills a mandate by the Department of Information Resources.

In addition, each functional area has federal and/or state requirements which the system supports.

## Increased Revenue

With the new development for each functional area, agency data has been analyzed and cleaned up. Erroneous records have been identified, and previously lost revenue has been captured as a result. With billing functions that have been implemented, increases in revenue have been realized by implementing the rules fully as they were intended. This additional revenue is a recurring benefit with each billing run.

## Technology Advancement

TRACS has been the agency's pioneer into the world of open systems architecture, enabling other development efforts outside the scope of TRACS, e.g., Accounts Receivable Prophecy System, time-keeping, and Laboratory

Information System (LIMS) to save developmental costs.

TRACS has laid the foundation for the work of the FCAA IMS project. The foundation architecture and data model will be utilized, and TRACS software code will be reused, thus eliminating a significant portion of the initial analysis costs and shortening development time. The technical experience and skills of the staff are readily transferrable.

TRACS has been the catalyst for the implementation of the wide-area network (WAN), which has numerous benefits for the agency, including electronic mail and file transfer capability.

TRACS has introduced "natural language," a software component which gives customers an English-like query and reporting capability. SAS, a statistical reporting package which handles complex analysis of data, has been given to staff to aid their surface water quality monitoring and also air monitoring.

# Appendix A

## What is currently in TRACS

### Application Module: Watershed Management Permits

#### Description of Data and Functionality

Potential releasers of effluent into Texas waterways are required to obtain a watershed management permit. Facilities included in the program include industrial wastewater facilities, agricultural facilities, and public and private domestic wastewater treatment facilities. Watershed management engineers evaluate the application and its impact on water quality in the state, most times devising a set of effluent limits for the facility. Each “extension” of the facility (such as separate outfall pipes) will have a set of limits, regulating not only how much of each material can be released, but how often and in what manner the effluent must be sampled and reported. The facility itself must perform the sampling and reporting in a statewide self-reporting program.

**TRACS includes a complete watershed management permit tracking system that automates the permit process ≤ from application through permit approval to**

**permit expiration.** The permitting and technical requirements, including effluent limits and facility monitoring reports required as part of the permit compliance process are kept in TRACS. In addition, TRACS provides a means to track the status of permits and applications, and includes major process milestones and milestone dependencies. This tracking system allows users to determine the status of each permit or application and identify bottlenecks. A prototype has been developed to track pre- and post-permit approval site inspections.

### Application Module: Surface Water Quality Monitoring

#### Description

**TRACS contains water quality monitoring samples dating back to 1968 for all water quality monitoring stations in the state.** This data includes levels of toxic chemicals and biological parameters that are used to determine water quality and to set limits for discharges from wastewater treatment facilities. In addition, this data is used to locate sources of point and nonpoint source pollution and investigate causes of fish kills and other damage to wildlife.

### Application Module: Standards and Segments

#### Description of Data and Functionality

(This application is currently being developed.)

The waterways of Texas are classified in a hierarchical manner of river basins and segments. Federal and state standards have been established for all numbered segments. These standards are being continually expanded as more parameters are incorporated and smaller tributaries are regulated. Standards are based on various use factors of the waters. TNRCC Standards staff must review all water quality permit applications to ensure that discharges will not cause violations of standard requirements for the receiving waters.

**TRACS will maintain identifications and descriptions of all segments in Texas, along with established standards for those segments. For those parameters with calculated standards, TRACS will automatically produce those calculations. During water quality permit processing, TRACS will transfer proposed permit requirements from water quality engineers to standards reviewers for**

# Appendix A

evaluation and feedback. After review, applications will be marked so that permit engineers can revise permit requirements, if necessary.

## Application Module: Water Rights and Uses Description

(This application is currently being developed.)

**All water rights, including claims and permits, and changes to those rights, such as amendments, changes of ownership, will be recorded in TRACS.**

An owner can hold multiple rights, each with different priority dates. One right can be held by multiple owners. Rights can have multiple specified usages, both storage uses and diversion uses. A single right can allow multiple diversion points, either from dams or from diversion ditches or pumps on the river. Parts of rights can be bought and sold, so that rights can be split or combined. Dams and diversion points are recorded within TRACS, with each dam having a controlling water rights permit.

## Application Module: Industrial and Hazardous Waste (IHW)

### Description

Texas requires generators, transporters, and receivers of hazardous and solid waste be registered with the agency and to submit reports on the wastes being generated, shipped and received. Generators of wastes must report all wastes produced and must account for all shipments and receipts of those wastes, as well as storage of wastes on-site. Receivers report on all wastes received and the disposition of such wastes. Due to the movement of wastes, the agency also regulates wastes generated by Maquiladoras, i.e., sites in Mexico affiliated with U.S. manufacturers, as well as wastes shipped into Texas from other states and countries and wastes shipped out of Texas.

**TRACS handles the registration process for IHW (notice of registration), recording information for each waste facility, including those industrial processes that handle waste, identification of specific waste streams, and the methods used to dispose of wastes.**

Records of owners, operators, and contact persons for the waste facilities are also kept. All

reports of waste generation and movement are recorded in TRACS. Discrepancies in the totals of wastes generated, shipped and received can easily be determined with further investigation. **TRACS also covers the One Time Shipper (OTS) program.** Data kept includes the waste being shipped, name and location of the generator and the generator's broker name and telephone number.

The TRACS system for NOR brought the IHW customers from an old batch procedure to a modern graphical user interface that is easy to learn and understand. Some of the benefits of the IHW TRACS system are the following

## Application Module: Storage Tanks

### Description

(This application is currently being developed.)

Texas contains many thousands of storage tanks used for petroleum products and hazardous materials. With few exceptions, these tanks are regulated by the agency and must be registered. Applications must report the size and construction method of the tanks, the equipment and construction techniques used for preventing and detecting leaks, and

# Appendix A

identification of owners, operators, installers, locations of the tanks, and substances being stored within them. Due to the magnitude and fluid nature of storage tank utilization, e.g., frequent changes in ownership of gas stations, changes in tank contents, installation and removal of tanks, the demands on agency staff are intense.

**The petroleum storage tank (PST) registration system pilot includes registration of PSTs and determination of financial assurance of PST owners.** Descriptions of storage tanks facilities are kept in TRACS, including descriptions of every individual regulated storage tank in the state. All changes to tank usage, characteristics, and ownership are maintained in the system.

Certain owners of storage tank facilities, i.e. retail, wholesale, and local governments with underground tanks, are required to demonstrate financial assurance to cover liability resulting from their storage of petroleum or hazardous substances.

Records of all financial assurance instruments received, such as insurance policies, are kept in TRACS with cross-references to facilities and their owners. TRACS generates letters when instrument renewal is near, upon lapsing of an

instrument, or for inadequate or missing coverage.

Additionally, there is a general pool of state funds which provides for cleanup expenses in the case of tank spills. All claims and reimbursements will be tracked.

## Application Module: FCAA

### Description

(This application is currently being developed.)

The Federal Clean Air Act (FCAA) information management system will address the state's information management needs under the FCAA.

**Specifically, this system will support program areas which deal with stationary air sources of air contaminants rather than mobile sources. The system will also benefit the state's existing permitting, compliance, enforcement and air quality planning programs which are directed toward improving and maintaining the air quality in the state.**

**The objective of the project is to develop an automated information system which will store information regarding the operating permit application as well as other relevant information such as monitoring, record keeping,**

**reporting and compliance information submitted subsequent to the issuance of the permit.** This system will also make this data accessible within the agency (TNRCC) and to a number of other entities such as the EPA, regulated community, other Texas governmental agencies, affected states and the general public.

The system will also act as an information resource to program areas within the agency and allow an auditing capability of the information in the system which affects those program areas.

# Appendix B

## Information Flow Between TNRCC and Report Originators

